

### Remarks

Initially, Applicants thank the Examiner for the comments provided at page 2 of the final Office Action with respect to the applicability of the Weir et al. patent to Applicants' independent claims. Based on this clarification of the Examiner's position, Applicants herein submit amendments to the independent claims, and various dependent claims, which more particularly detail Applicants' protocol for providing addresses to be used in a verification environment. These claim amendments are submitted in a *bona fide* attempt to further prosecution of this application. Support for the amended language can be found throughout the application as filed. For example, reference FIGS. 5-9, and the supporting discussion thereof. Support for employing a "lookup table to filter the generated addresses" is found, for example, in the address space class structure of FIG. 4 as well as the use thereof in the process step 506 of FIG. 5, and the address selector control class 802 of the address selection mechanism depicted in FIG. 8. No new matter is added to the application by any amendment presented. Claims 1-31 remain pending herein.

Substantively, claims 1-31 stand rejected under 35 U.S.C. §103(a) as being obvious over Weir et al. (U.S. Patent No. 5,729,559; hereinafter Weir). This rejection is respectfully, but most strenuously, traversed to any extent deemed applicable to the amended claims presented herewith, and reconsideration thereof is requested.

Weir depicts in FIG. 2 and describes at column 5, line 64 – column 6, line 41, a sequence of operations executed by the random test generator disclosed therein. Specifically, Weir teaches determining an initial behavioral model state and sending a set behavioral model state command to a simulator 202. The random test generator saves the current behavioral model state as a pre-simulation behavioral model state 204. A test vector is generated based on a random number and the current behavioral model state 206. *The test pattern is then sent to a simulator for simulation* 208. To simulate the test pattern, the random test generator sends a simulate command to the simulator. The simulator receives the simulate command as input as well as the test pattern and simulates the test pattern according to the behavioral model. The simulator then sends the current behavioral model state to the random test generator as output 210. The random test generator determines from the current behavioral model state whether the test pattern employed in the simulation should be kept 212.

In comparison, Applicants recite a specific protocol for generating addresses for use in a verification environment. Applicants' protocol includes:

- generating addresses having one or more attributes associated therewith, the generating of at least one address of the generated addresses being based on at least one selection attribute to be used in selecting at least one address of the one or more generated addresses;
- *employing a lookup table to filter the generated addresses with the one or more attributes into a saved list of addresses of particular type*, the list of addresses of particular type comprising at least one address;
- *selecting at least one address from the list of addresses of particular type to be forwarded to a component under test in a verification environment*, the selecting employing a filter specifying the at least one selection attribute that corresponds to at least one attribute of the one or more attributes, wherein the generating, employing and selecting are controlled to ensure at least one address is selected that satisfies the filter

In Applicants' protocol, there is no simulation of a generated address prior to placement of that address into the list of addresses of particular type from which the filter is to select. Specifically, Applicants' protocol employs a lookup table to filter the generated addresses with one or more attributes into a list of addresses of particular type. This lookup table filtering is believed clearly distinct from the teachings of Weir.

Weir teaches in steps 208, 210 and 212, sending a generated test pattern to a simulator for simulation, and after simulation thereof, evaluating a current behavioral model state and determining therefrom whether to keep the generated test pattern. In contrast, Applicants generate addresses having one or more attributes, then employ a lookup table to filter the generated addresses with the one or more attributes into a saved list of addresses of particular type. From this saved list of addresses of particular type, at least one address is selected for subsequent forwarding to a component under test in a verification environment using a filter specifying the at least one selection attribute.

Further, in Applicants' approach, the selecting of at least one address is from the list of addresses of particular type obtained from the lookup table filter. In comparison, Weir teaches keeping (i.e., selecting) a particular test pattern 212 based on a current behavioral model state after simulation of the test pattern. In Applicants' recited protocol, there is no simulation of the test pattern, but rather, a lookup table is employed to filter the generated addresses to produce the

saved list of addresses of particular type from which the selection is then made for forwarding of an address to a component under test in a verification environment. Applicants' recited protocol occurs prior to use of the selected address in the component under test in the verification environment. In contrast, Weir employs an iterative process wherein test vectors are generated based on a random number and current behavioral model state, then simulated, and responsive to the simulation, a determination is made whether the test pattern is to be held for subsequent use or discarded.

For at least the above-noted reasons, Applicants respectfully submit that the amended independent claims submitted herewith patentably distinguish over the Weir patent, as well as the other art of record. A careful reading of Weir fails to uncover any teaching or suggestion of employing a lookup table to filter generated addresses with the one or more attributes into a saved list of addresses of particular type, and then the selecting of one address from the list of addresses of particular type to be forwarded to a component under test in a verification environment, as particularly recited in the independent claims at issue.

The dependent claims are believed allowable for the same reasons as the independent claims, as well as for their own additional characterizations. In this regard, Applicants respectfully request that each of the dependent claims be examined on its own merit.

By way of example, Applicants recite in claims 2, 12 & 23 that the lookup table is an address space class structure (such as depicted in FIG. 4 of the application). This address space class structure characterization clearly differentiates Applicants' filtering approach from that taught by Weir.

Further, Applicants recite in claims 10, 20 & 31 *dynamically changing the list of addresses of particular type, in response to a change to one or more attributes of the generated addresses*. A careful reading of Weir and the known art fails to uncover any teaching or suggestion of a facility for accomplishing this dynamically changing of such a list of generated addresses of particular type responsive to a change in one or more attributes of the one or more generated addresses.


To the extent that the final Office Action alleges inherency in one or more aspects of Applicants' independent claims and/or dependent claims, Applicants request further clarification. The doctrine of inherency is well settled in patent law. In relying on the theory of inherency, it must be shown that there is a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied art. The final Office Action fails to present a convincing line of reasoning that any of the allegedly inherent aspects of Applicants' recited facility *necessarily* flow from the teachings of Weir, and thus, fails to state a *prima facie* case of obviousness against the dependent claims at issue.

With respect to the parenthetical reference to U.S. Patent No. 6,292,765 contained at page 4 of the final Office Action, Applicants request clarification. If a reference is relied upon to support a rejection, whether or not in a minor capacity, that reference should be positively included in the statement of the rejection. Applicants respectfully request clarification of the basis for the rejection to the extent that the Examiner may be relying upon this patent for the rejection. (MPEP §706.02(j)).

All claims are believed to be in condition for allowance, and such action is respectfully requested.

Applicants' undersigned attorney is available should the Examiner wish to discuss this application further.

Respectfully submitted,

  
Kevin P. Radigan  
Attorney for Applicants  
Registration No.: 31,789

Dated: December 06, 2006.

HESLIN ROTHENBERG FARLEY & MESITI P.C.  
5 Columbia Circle  
Albany, New York 12203-5160  
Telephone: (518) 452-5600  
Facsimile: (518) 452-5579